

**Preliminary Amendment filed March 3, 2005**  
**U.S. Patent Application Serial No. 09/839,357**

**REMARKS**

Claims 1, 4, 14, 15, 22, and 28-31 are pending in this application. Claims 8 and 18 have been canceled herein without prejudice or disclaimer, claims 1, 4 and 14 have been amended, and new claims 30 and 31 have been added.

Support for the amendment to claims 1, 4 and 14 is supported by the description of the present specification on page 8, line 14, that the effect of the present invention can last at least 6 months.

Support for new claims 30 and 31 may be found in original claims 12 and 13.

Applicant submits that the amendments overcome the rejection over Akinari et al. (JP '309) in view of Cardarelli '374 and Vaugh et al. '267.

Applicant notes the following differences between the present claims and Akinari et al. A translation of Table 6 of Akinari et al. is provided below. As is clear from table 6 of Akinari et al., the preparation of Akinari et al. cannot retain the sustained-release effect for 160 days (i.e., 5 months and 10 days). However, the preparation of the amended claims of the present invention can retain the sustained-release effect for 6 months. Therefore, the preparation of the present invention is clearly superior to the preparation of Akinari et al. on the retention time of the effect. The present claims have been amended to specifically recite an effect maintained for 6 months.

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Since Akinari et al. discloses that the preparation comprising a polyvinyl alcohol (PVA) and a quaternary ammonium (not including acetyl pyridinium chloride (CPC)) cannot retain the sustained-release effect for 160 days, it is not obvious over Akinari et al., even in view of Vaughn et al. and Cardarelli, that a preparation comprising PVA and CPC can retain the sustained-release effect for 6 months. This represents a surprising result over these references.

Therefore, claims 1, 4, 14, 15, 22 and 28-31 are novel and non-obvious over Akinari et al., Vaughn et al., and Cardarelli, taken separately or in combination.

**Translation of Table 6 in the specification of Akinari et al.**

The results of inhibiting propagation of iron bacteria and generation of slimes at the tunnel in sea by using the preparation of the present invention.

Number	Preparation Number	The volume of water flow (cc/min)	Judgment of effect (days) <sup>1</sup>			
			40	85	130	160
1	C-5	10 and under	○	○	△	X
2	C-5	240	○	○	△	X
3	C-5	400	○	○	△	X
4	C-5	880	○	△	△	X
5	C-5	2720	X	X	X	X
6	A-6	10 and under	△	△	X	X
7	A-6	150	△	△	△	X
8	A-6	250	△	△	X	X
9	A-6	420	△	X	X	X
10	A-6	610	○	○	△	X
	Control	---	X	X	X	X

<sup>1</sup>: Judgement of inhibition effect:

- - There is no propagation of iron bacteria and generation of slimes.
- △ - There is little propagation of iron bacteria and generation of slimes.
- X - There is much propagation of iron bacteria and generation of slimes.

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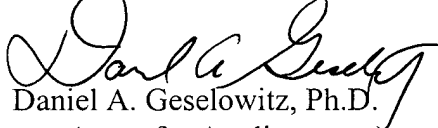
The above amendments are believed to place the claims in proper condition for examination.

Early and favorable action is awaited.

In the event that any fees are due in connection with this paper, please charge our Deposit  
Account No. 01-2340.

Respectfully submitted,

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